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Notes on the Birds of Northern Melanesia. 3¹ Passeres

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The present paper continues the revisions of birds from northern Melanesia and is devoted to the Order Passeres. The literature on the birds of this area is excessively scattered, and one of the functions of this review paper is to provide bibliographic references to recent literature of the various species, in order to make it more readily available to new students. Another object of this paper, as of the previous installments of this series, is to indicate intraspecific trends of geographic variation in the Bismarck Archipelago and the Solomon Islands and to state for each species from where it colonized northern Melanesia. Such information is recorded in preparation of an eventual zoogeographic and evolutionary analysis of the bird fauna of the area.

For those who are interested in specific islands, the following regional bibliography (covering only the more recent literature) may be of interest:

BISMARCK ARCHIPELAGO

Reichenow, 1899, Mitt. Zool. Mus. Berlin, vol. 1, pp. 1-106; Meyer, 1936, Die Vögel des Bismarckarchipel, Vunapope, New Britain, 55 pp.

ADMIRALTY ISLANDS: Rothschild and Hartert, 1914, Novitates Zool., vol. 21, pp. 281-298; Ripley, 1947, Jour. Washington Acad. Sci., vol. 37, pp. 98-102.

ST. MATTHIAS: Hartert, 1924, Novitates Zool., vol. 31, pp. 261-278.

ROOK ISLAND: Rothschild and Hartert, 1914, Novitates Zool., vol. 21, pp. 207-218.

¹ BIRDS COLLECTED DURING THE WHITNEY SOUTH SEA EXPEDITION, No. 63. For Nos. 1 and 2 of "Notes on the birds of northern Melanesia," see American Museum Novitates No. 1294 (1945) and No. 1417 (1949).

- FRENCH (WITU) ISLANDS: Hartert, 1926, *Novitates Zool.*, vol. 33, pp. 171-178.
NEW BRITAIN: Hartert, 1926, *Novitates Zool.*, vol. 33, pp. 122-145; Meyer, 1934, *Jour. Ornith.*, vol. 82, pp. 568-578; Mayr, 1934, *Amer. Mus. Novitates*, no. 709, pp. 1-15.
NEW IRELAND: Hartert, 1925, *Novitates Zool.*, vol. 32, pp. 115-136.
NEW HANOVER: Hartert, 1924, *Novitates Zool.*, vol. 31, pp. 194-213.
LIHIR: Meyer, 1934, *Jour. Ornith.*, vol. 82, pp. 294-308.
FENI: Hartert, 1926, *Novitates Zool.*, vol. 33, pp. 33-41.

SOLOMON ISLANDS

- Rothschild and Hartert, 1905, *Novitates Zool.*, vol. 12, pp. 243-268 (particularly Bougainville, Choiseul, Gizo, New Georgia, and Rendova); Mayr, 1945, *Birds of the southwest Pacific*, pp. 211-282 (in the succeeding pages of the present article referred to as Mayr, 1945); Baker, 1948, *Smithsonian Misc. Coll.*, vol. 107, no. 15, pp. 5-21 (Bougainville and Guadalcanal).
NISSAN: Hartert, 1926, *Novitates Zool.*, vol. 33, pp. 41-48; Ripley, 1947, *Jour. Washington Acad. Sci.*, vol. 37, pp. 95-98.
TREASURER'S ISLAND (MONO): Rothschild and Hartert, 1902, *Novitates Zool.*, vol. 9, p. 594.
BOUGAINVILLE: Virtue, 1947, *Emu*, vol. 46, pp. 324-331; Danis, 1937, *Bull. Mus. Hist. Nat.*, Paris, vol. 9, pp. 119-123; Danis, 1938, *ibid.*, vol. 9, pp. 362-365.
YSABEL: Rothschild and Hartert, 1902, *Novitates Zool.*, vol. 9, pp. 581-594.
FLORIDA: Rothschild and Hartert, 1901, *Novitates Zool.*, vol. 8, pp. 179-189.
KULAMBANGRA: Rothschild and Hartert, 1905, *Novitates Zool.*, vol. 12, pp. 231-268.
NEW GEORGIA: Sibley, 1951, *Condor*, vol. 53, pp. 81-92.
VELLA LAVELLA: Rothschild and Hartert, 1908, *Novitates Zool.*, vol. 15, pp. 351-358.
PAVUVU: Bull, 1948, *Emu*, vol. 47, pp. 165-176.
GUADALCANAL: Rothschild and Hartert, 1901, *Novitates Zool.*, vol. 8, pp. 373-382.
MALAITA: Mayr, 1931, *Amer. Mus. Novitates*, no. 504, pp. 1-26.
SAN CRISTOBAL: Rothschild and Hartert, 1908, *Novitates Zool.*, vol. 15, pp. 359-365.
RENNELL: Mayr, 1931, *Amer. Mus. Novitates*, no. 486, pp. 1-29; Kinghorn, 1937, *Proc. Zool. Soc. London*, vol. 107B, pp. 177-184.

I am greatly indebted to Mr. J. D. Macdonald, British Museum (Natural History), for information on the type of *Myiagra modesta* Gray, to Dr. Charles G. Sibley, Cornell University, for measurements of *Edolisoma t. matthiae*, and to Mrs. Carmela B. Rosen, the American Museum of Natural History, for a great deal of help in the preparation of this paper.

PITTAS (PITTIDAE)

Three species groups of the genus *Pitta* have invaded northern Melanesia. The *sordida* group reached the Admiralty Islands (*superba*), the *erythrogaster* group the Bismarck Archipelago, and the *brachyura*-

versicolor group the Solomon Islands (*anerythra*). Colonization has been transoceanic in each case. The strong subsequent isolation has led to the development of two endemic species and several pronounced subspecies.

Pitta superba Rothschild and Hartert

This strikingly distinct and handsome species is entirely restricted to Manus Island, Admiralty Islands. There it seems fairly common and widespread. Meek, the original discoverer, obtained a large series (1914, *Novitates Zool.*, vol. 21, p. 294), and W. F. Coultas of the Whitney South Sea Expedition found it at all his collecting stations (Petayia, Drabui, and Malai Bay).

Although clearly related to the *P. sordida* group, this species has become strongly modified, and little can be said about its history except that it must be an old endemic. There is perhaps a distant relationship to *Pitta maxima* of the northern Moluccas.

Pitta sordida does not reach the Bismarck Archipelago proper, although it occurs as close as on Karkar (*hebetior*) and Long Island (*novae-guineae*).

Pitta anerythra

This species is limited to the three northernmost islands of the Solomons. *Pitta a. anerythra* Rothschild (1901, *Bull. Brit. Ornith. Club*, vol. 12, p. 22) of Ysabel has the crown rich chestnut brown, paler on the nape; the under parts are deep ocher. *Pitta a. pallida* Rothschild (1904, *Bull. Brit. Ornith. Club*, vol. 15, p. 7) of Bougainville is larger, the crown is mostly black, and the under parts are pale clay color. Choiseul is inhabited by the intermediate subspecies *nigrifrons* Mayr (1935, *Amer. Mus. Novitates*, no. 820, p. 4; 1936, *ibid.*, no. 828, p. 13), which is on the whole similar to nominate *anerythra* but has much more black on the head.

Because there are no relatives of this species in the Papuan region, one must assume that colonization has taken place directly from Australia where the related species *P. versicolor* lives. (For a map of the species and subspecies of this group, see Stresemann, 1939, *Jour. Ornith.*, vol. 87, p. 408.)

Pitta erythrogaster

This widespread polytypic species has its center of distribution in Celebes and the Moluccas. In the east it extends as far as the D'Entrecasteaux Archipelago (*finschii*) and the Louisiades (*meeki*), but does

TABLE 1
 VARIATION IN SIZE IN *Pitta erythrogaster*
 (Averages are given in parentheses.)

	Males	Females	Unsexed
Rook Island			
Wing	103.5, 105, 106, 107	106	
Culmen	25, 26, 26, 26	25	
New Britain (<i>gazellae</i>)			
Talasea			
Wing	102, 104, 106, 109, 109	105, 106, 108	
Culmen	25, 25, 26, 26, 27		
Bainings			
Wing	105, 106, 107, 107, 107, 107, 109, 109, 110		
Culmen	25, 26, 26, 26, 27, 27, 27, 27, 27, 27		
Nakanai Mountains			
Wing	104, 106	103	
New Ireland (<i>novaehibernicae</i>)			
Wing	92, 93, 95, 98, 99, 99, 99, 103 (97.2)		
Tail	37, 37, 37, 38, 38, 39, 39, 40		
Culmen	25, 25.5, 26, 26, 26.5, 27, 27 (26.1)		
Tarsus	39, 40, 40		
New Hanover (<i>extima</i>)			
Wing	101, 102, 102, 103, 104, 104 (103.5)	103, 106, 107	102, 103, 104, 105
Tail	39, 40, 40, 40, 42, 42		
Culmen	26, 27, 27, 27, 28 (27.0)		
Tarsus	38, 38, 38.5, 39, 42.5		
Tabar (<i>splendida</i>)			
Wing	107.5, 108, 108, 108.5, 109, 109, 113	107, 108, 109, 110, 110.5, 111	
Tail	40, 42, 42, 42, 42, 42		
Culmen	27, 27, 27, 27, 28, 28.5, 28.5		
Tarsus	40, 41, 42, 42, 42, 42, 43		

not reach the Solomons. The Bismarck Archipelago is inhabited by four subspecies of which so far only two have been named.

Pitta erythrogaster gazellae Neumann

This New Britain form (1908, Ornith. Monatsber., vol. 16, p. 27) is very similar to *habenichti* Finsch of northern New Guinea and shares with it the vividly reddish nape. However, it differs by the more pronounced bluish stripe in the middle of the crown, by the somewhat less blackish (more reddish brown) sides of the crown, and by having the black of the upper throat not so deep. The black border below the blue chest band averages much narrower, although this character is somewhat variable. Birds from Rook Island clearly belong to this form, although the nape averages less reddish and the back somewhat more greenish.

There is little doubt that this form reached Rook Island and New Britain from northern New Guinea.

Pitta erythrogaster novaehibernicae Ramsay

This race (Ramsay, 1878, Proc. Linnean Soc. New South Wales, vol. 3, p. 73) is strikingly different from *gazellae*. The fore part of the crown is dull rufous brown, only slightly contrasting with the reddish nape. The blue stripe in the middle of the crown is more or less obsolete. On the under sides the black coloration is absent; the upper throat is pale rufous-fuscou, and the black border below the blue chest band is either missing or barely indicated by darkened feather tips.

RANGE: New Ireland.

Pitta erythrogaster extima, new subspecies

TYPE: A.M.N.H. No. 553880, Rothschild Collection; adult male; New Hanover, Bismarck Archipelago; February 8, 1923; A. F. Eichhorn.

Quite similar to *novaehibernicae*, but larger. The nape on the average paler, more orange rufous. The blue stripe on the crown less reduced and the back more bluish green.

RANGE: New Hanover.

Pitta erythrogaster splendida, new subspecies

TYPE: A.M.N.H. No. 335504; adult male; Tabar Island, Tabar group; January 28, 1935; Whitney South Sea Expedition (W. F. Coultas).

Back, rump, tail, scapulars, and edges of upper wing coverts and secondaries a rich deep blue. Nape scarlet red. Forehead and crown blackish with a reddish wash; occasionally an indication of a few bluish feathers in the middle of the crown. Nape bordered against the back by a narrow

blackish band, the continuation of the black throat. Under parts similar to those of *gazellae* but all colors richer and deeper. Throat entirely black, chest band narrowly margined with black. White wing bar much reduced, usually present only on inner web of third primary. Females very similar but upper throat and crown less blackish. Nape averaging more orange red.

RANGE: Restricted to Tabar Island, east of New Ireland.

This splendid new subspecies does not resemble any of the neighboring races of the species. In its rich blue back, it is somewhat like other forms of this species such as *finschii* and *cyanonota* but differs from these forms by an even deeper, richer blue and by the coloration of nape and crown. There is little doubt that these blue-backed forms are not closely related to one another but have realized this potentiality of the species independently. *Pitta e. splendida* is a typical peripherally isolated population which has all the earmarks of an incipient species. It is interesting that this richly colored form should occur so near the pale form *novaehibernicae*.

SWALLOWS (HIRUNDINIDAE)

Only two species of swallows have been recorded from northern Melanesia. The Australian Tree Martin (*Hirundo nigricans*) is merely a rare winter visitor. The Whitney South Sea Expedition has added it to the list of Solomon Island birds. R. H. Beck collected one male and one female on Guadalcanal on May 19, 1927. A list of the records from the Bismarck Archipelago was compiled by Stresemann (1934, Ornith. Monatsber., vol. 42, pp. 24-25).

Hirundo tahitica

Northern Melanesia is of particular interest for the understanding of this species, because it is here that the eastern and western groups of this species meet. The eastern group ("Pacific Swallow") is dark-bellied and has no white in the tail; the western group ("Java Swallow") has a whitish abdomen and much white in the tail.

In the Solomon Islands, from Nissan to Santa Anna, a dark population is found, which is inseparable from *H. t. subfusca* Gould (Moala, Fiji Islands). The species had been known from Bougainville, Bougainville Strait (Alu, Munia), Treasury, Ysabel, Kulambangra, Guadalcanal, and San Cristobal, but the Whitney South Sea Expedition added records from Nissan, Fauro, Choiseul, Vella Lavella, Bagga, New Georgia, Narovo, and Santa Anna. A series from the Lihir (Lihir, Malie) and Tanga (Boang) groups are likewise indistinguishable from *subfusca*.

The New Britain population bridges the gap between dark *subfusca*

and light *frontalis* (of New Guinea) and was therefore described as *ambiens* (Mayr, 1934, Amer. Mus. Novitates, no. 709, p. 12). Its characters and a detailed discussion of its taxonomic position were given in the original description. No new material has become available since the collection of the type series of 15 specimens at Wide Bay, New Britain, by W. F. Coultas in 1933. Two specimens from New Ireland are darker underneath, with the edges of the abdominal feathers dark rufous rather than whitish (male adult: wing, 111; tail, 51). They are probably best included with *subfusca*.

Meek collected two males and two females on Rook Island (Rothschild and Hartert, 1914, Novitates Zool., vol. 21, p. 214), which are indistinguishable from *frontalis* from New Guinea (wing, male: 109, 109; female: 107, 111). It would be interesting to know what the characters are of birds from the part of New Britain that is opposite Rook Island.

The Long Island population is nearest to, but not identical with, *frontalis*. Admixture of *ambiens* genes is evident in several characters. The abdomen is darker, the size averages slightly larger than in lowland *frontalis*, and the size of the white spots on the tail-feathers is reduced. Still it would serve no useful purpose to attach a name to this population, so obviously affected by gene exchange with *ambiens* (New Britain). There is much evidence that all animal and most plant life of Long Island was destroyed by a volcanic explosion in the eighteenth century, and the swallow population was presumably restored by immigration from New Guinea and New Britain. The New Guinea (*frontalis*) characters dominate the present population.

Long Island: Wing, male adult: 110, 111, 111, 112; female: 109, 109. Tail, male: 48, 49, 50, 51; female: 49, 50.

CUCKOO-SHRIKES (CAMPEPHAGIDAE)

This family is very well represented in northern Melanesia, namely, by eight species or species groups. Those from the Solomon Islands were listed and described in Mayr, (1945, pp. 247–250) and are therefore treated in less detail here than the forms from the Bismarck Archipelago.

GENUS *LALAGE*

The relationship and geographic variation of the various species of *Lalage* were discussed by Mayr and Ripley (1941, Amer. Mus. Novitates, no. 1116, pp. 1–18). Only two species reach northern Melanesia. The easternmost Solomon Islands have been colonized by *Lalage leucopyga*, coming from southern Melanesia. The species was, however, unable to spread beyond San Cristobal and Ugi, where the endemic *affinis* Tristram occurs (*ibid.*, no. 1116, p. 17).

The Bismarck Archipelago was invaded by *Lalage leucomela* from New Guinea.

Lalage leucomela

With two exceptions all the races in the Bismarck Archipelago are rather similar to one another. The New Britain race, *L. l. falsa* Hartert, 1925, differs from *polygrammica* of New Guinea in the male plumage by being more distinctly barred underneath and more extensively washed with rufous on the abdomen. The white edges of the feathers of the rump are broader. Females are lighter underneath than *polygrammica*, particularly on throat and upper breast. The upper parts are of a lighter, more ashy, fuscous gray, not so slaty. *Lalage l. obscurior* from Fergusson Island is considerably darker in both sexes.

There appears to be no difference between specimens from Rook Island, New Britain, and the Duke of York group.

Lalage l. karu Lesson, 1826, from New Ireland differs from *falsa* as follows. Adult male, under parts grayer with the barring on breast and flanks somewhat denser and the rufous wash restricted to the crissum and center of the abdomen. Adult female, purer gray above and with the rufous of the under parts restricted to the lower abdomen. (See Hartert, 1925, *Novitates Zool.*, vol. 32, p. 131.)

Lalage l. albidior (New Hanover) differs from *karu* in the male plumage by being whiter underneath owing to the reduction of barring. The rufous is restricted to the lower abdomen. Females are very similar to those of *karu* but also somewhat whiter below. (See Hartert, 1924, *Novitates Zool.*, vol. 31, p. 208.)

The isolated subspecies *conjuncta* of St. Matthias Island (Mussau) is poorly known. The type, an adult male, is still the only recorded specimen. It differs by the complete absence of barring underneath, by the absence of the white superciliary stripe, a white rump patch and the deep tawny abdomen and crissum. (See Hartert, 1924, *Novitates Zool.*, vol. 31, p. 272.)

The islands northeast of New Ireland are inhabited by two subspecies which, though similar to each other, differ strikingly from the other races of the Bismarck Archipelago.

Lalage l. ottomeyeri Stresemann (1933, *Ornith. Monatsber.*, vol. 41, p. 114) is more or less pure white underneath, with faint barring in some specimens. The feathers of the rump are edged with gray. The white edges on the median and upper wing-coverts and on the secondaries are very broad. Adult females are white underneath without any rufous wash on abdomen and under tail-coverts. Breast and flanks are narrowly

barred. The upper parts are very dark, sooty gray. The feathers of the rump are margined with grayish white. Known only from Lihir Island in the Lihir group.

William F. Coultas of the Whitney South Sea Expedition collected not only a fine series of *ottomeyeri* but also a new subspecies on Tabar Island in the Tabar group.

Lalage leucomela tabarensis, new subspecies

TYPE: A.M.N.H. No. 335518; adult male; Tabar Island, Tabar group; January 24, 1935; Whitney South Sea Expedition (W. F. Coultas).

Adult male similar to that of *ottomeyeri*, but feathers of rump and upper tail-coverts broadly edged with white. Superciliary and white loreal stripes much broader. Under parts pure white without traces of barring; under tail-coverts with a faint buffy wash.

Adult female, upper parts much lighter, purer slate gray, whitish edges of feathers of rump broader. Under parts similar but breast faintly washed with grayish.

RANGE: Known only from Tabar Island, Tabar group.

The wing measurements of *Lalage leucomela* in the Bismarck Archipelago are as follows:

	MALE	FEMALE
Rook Island	96, 96, 99, 100	99, 100
New Britain	95, 95.5, 96, 97, 97.5, 98, 98, 99, 101, 102	93, 94.5, 94.5, 95.5, 95.5, 95.5, 97, 99
New Ireland	98, 98.5, 99, 100, 100	
New Hanover	96.5, 98, 99	92, ¹ 96, 97, 99
Lihir	100, 101, 101.5, 102	94, 94.5, 99, 99, 100, 100, 101, 101
Tabar	99, 101, 101	98.5, 99, 100, 102

GENUS *CORACINA*

It has become evident in recent years that there is no satisfactory difference between *Edolisoma* and *Coracina*. Following Delacour and Peters (MS), I treat *Edolisoma* as a subgenus of *Coracina*.

SUBGENUS *EDOLISOMA*

Only two species of this subgenus occur in northern Melanesia. One, *C. holopolia*, is restricted to a few islands in the Solomons. Its geographic variation has already been discussed (Mayr, 1931, Amer. Mus. Novitates, no. 504, pp. 17-18). Superficially it somewhat resembles *C. mon-*

¹ Juveniles.

tana, but its voice is quite different and relationship is probably not close. The species is one of the rarer Solomon Islands endemics.

The other species is the widespread *C. tenuirostris*, of which six races occur in the Bismarck Archipelago and four in the Solomon Islands.

The males of all six races in the Bismarck Archipelago are very similar to one another, differing principally in size and in the darkness of the blue-gray coloration. The females fall into two groups, one with plain under parts (*remota*, *ultima*) and one with barred under parts (*rooki*, *heinrothi*, *admiralitatis*, *matthiae*).

GROUP WITH BARRED FEMALES

Coracina tenuirostris rooki Rothschild and Hartert

ADULT MALE: Rather dark blue slate gray: lores and ear-coverts blackish; throat very dark.

ADULT FEMALE: Crown blue-gray; back olive-brown; upper wing-coverts and wing-feathers with ocher or rufous margins; under parts pale rust colored or ochraceous, barred from chin to lower abdomen; under tail-coverts unbarred. (See Rothschild and Hartert, 1914, *Novitates Zool.*, vol. 21, p. 215.)

RANGE: Rook Island.

Coracina tenuirostris heinrothi Stresemann

When describing this subspecies, Stresemann had apparently only one female and one immature male. His whole differential diagnosis reads: "Larger and underneath lighter than *rooki*" (1922, *Ornith. Monatsber.*, vol. 30, p. 7). The material more recently collected on New Britain confirms the larger size, but not the color difference. The female plumage is very variable in a New Britain series, including specimens that are paler and some that are darker and more richly colored than *rooki*. The degree of barring likewise is somewhat variable. There is no difference between adult males.

RANGE: New Britain.

Coracina tenuirostris admiralitatis Rothschild and Hartert

Exceedingly similar to *rooki-heinrothi* but of small size. Adult males almost indistinguishable; edges of upper wing-coverts and secondaries paler, whitish, not blue-gray. Adult females much washed with rufous underneath, not more or less deep ocher; back more brownish, less gray-brown; feathers of rump and upper tail-coverts with rufous edges. (See Rothschild and Hartert, 1914, *Novitates Zool.*, vol. 21, p. 296.)

RANGE: Admiralty Islands.

Coracina tenuirostris matthiae Sibley

Adult female similar to that of *C. t. heinrothi*, especially on the under parts which are light ochraceous buff, not ochraceous tawny as in *heinrothi*. Differs from that of *rooki* and of *admiralitatis* by larger size and paler coloration. Females barred underneath. (Sibley, 1946, Condor, vol. 48, p. 182.) Wing, male: 118.6, 123.9; female: 116.6, 119.7, 120.2 (Sibley, *in litt.*).

RANGE: Emirau (Storm) and Mussau (St. Matthias) Islands in the St. Matthias group.

GROUP WITH UNBARRED FEMALES

In the northeast of the Bismarck Archipelago is a group of islands occupied by populations with unbarred females. It is possible that these populations came from the Solomon Islands. In some respects they are closer to the *erythropygia* group than to the barred birds of the previous group.

Coracina tenuirostris remota Sharpe

Adult male differs from that of the *heinrothi* group by being more blue-gray, less blackish slate. Females unbarred, but occasionally with some black spots on the abdomen.

RANGE: New Hanover (type locality), New Ireland, and Feni Island.

There is some difference between birds from the various islands. Females from New Hanover and Feni are more deeply rufous ochraceous underneath; those from New Ireland are somewhat lighter. It is possible that the Feni population is affected by gene flow from the dark *saturation* population of the northern Solomon Islands, yet one of the two females has some barring on throat, breast, and flanks.

Coracina tenuirostris ultima, new subspecies

TYPE: A.M.N.H. No. 335989; adult female; Lihir Island, Lihir group; November 1, 1934; Whitney South Sea Expedition (W. F. Coultas).

ADULT MALE: Like that of *remota*.

ADULT FEMALE: Under parts very much paler than in that of *remota*. Upper parts darker, the crown being of a deeper blue-gray and the brown of the back more mixed with blue-gray; rump and central tail-feathers more grayish buff, less rust colored.

RANGE: Lihir (Lihir, Masabiet) and Tanga Islands. Because the rufous in the plumage of females tends to bleach with wear and may be-

come very pale buff in worn specimens, it is necessary to compare only specimens in comparable plumage condition.

The wing measurements of *Coracina tenuirostris* from the Bismarck Archipelago are as follows:

	MALES	FEMALES
Rook Island	121	108, ¹ 115, ¹ 117 ¹
New Britain	122, 123, 123, 124, 124, 124, 124, 124.5, 127.5, 128, 129	119, 120, 121.5, 122.5, 122.5, 123, 126
Admiralty Islands	104, 107, 108, 109, 109	103, 103, 103.5, 104, 105, 105, 106, 107, 107.5
St. Matthias	118.6, 122, 123.9, 127	116.9, 119.7, 120.2
New Hanover	127, 128, 128.5	121, 122.5, 123, 123.5, 124, ¹ 126
New Ireland	121, ¹ 129	122, 124, 126
Feni Island	123, 123, 124, 124.5	122, 122
Lihir Island	120.5, 124	122
Masabiet Island	120, 120, 121.5, 123.5, 125	119, 119, 120.5, 123, 124
Tanga Island	118, 121, 123, 126, 127	120, ¹ 121, 125

Coracina tenuirostris OF THE SOLOMON ISLANDS

The four forms occurring in the Solomon Islands have been discussed repeatedly, and nothing further needs be said. (See Mayr, 1945, p. 248; Rothschild and Hartert, 1901, *Novitates Zool.*, vol. 8, p. 373; Rothschild and Hartert, 1902, *ibid.*, vol. 9, p. 582.) Most of the islands are inhabited by *erythropygia* and *saturation* which are similar to each other and belong clearly to the same group as the unbanded forms of the northern Bismarck Archipelago (*remota* group). The direction of the colonization is doubtful, but the distinctness of *salomonis* makes it probable that unbanded forms are an old Solomon Island element which from there colonized the northern Bismarck Archipelago; in other words, that the colonization went from east to west.

Adult males are very similar to those of *remota*, but with the edges of the wing-feathers lighter. Females of *erythropygia* are almost indistinguishable from those of *remota* of New Hanover, but average perhaps even browner on the back and more rufous on the rump. This tendency is accentuated in *saturation* in which the rufous of the rump spreads onto back and tail.

The San Cristobal subspecies (*salomonis*) is, as in so many other species, remarkably different. The adult male is much paler gray throughout, and black is restricted to the lores. The tail is all black. The female is totally different from that of all other subspecies of *tenuirostris*. Above

¹ Juveniles.

it is indistinguishable from the male, gray with a black tail, with the lores dark gray. The entire under parts are rich tawny rufous without any traces of barring. The outer tail-feathers have broad rufous tips. This strikingly different form must be an old endemic.

There is only one barred subspecies of the species in the Solomon Islands, *nisoria* Mayr (1950, Auk, vol. 67, p. 104) on the Pavuvu Islands. This population was unquestionably ultimately derived from *mülleri* (New Guinea) or *tagulana* (Lousiades), but differs by its smaller size and by the strong admixture of rufous on back, rump, wings, and tail which indicates the effect of genes from the neighboring *erythropygia* populations.

Coracina papuensis

Five races of this species are known from northern Melanesia. They clearly belong to two groups. The three subspecies of the Solomon Islands (*perpallida*, *elegans*, *eyerdami*) form one group, distinguished by comparatively small size and pale coloration (Mayr, 1945, p. 249). Even the largest and darkest of these forms (*eyerdami*) is paler and much smaller than *sclateri* Salvadori, 1878 (Rook Island, New Britain, New Ireland,

TABLE 2
MEASUREMENTS OF *Coracina papuensis* FROM THE BISMARCK ARCHIPELAGO

	MALES	FEMALES
<i>sclateri</i>		
Rook Island		
Wing	160	158, 159
Bill	35	
New Britain		
Wing	155, 156, 156, 157, 158.5, 160, 160.5, 162, 162, 163, 163.5, 164	148, 152, 153, 153, 154, 155, 157, 158, 160, 160, 162
Bill	35, 35, 36	
New Ireland		
Wing	155, 155, 159, 161, 162	
New Hanover		
Wing	165, 165, 165, 166, 166	154, 159, 161, 165
Bill	35, 36, 36, 37, 38	
<i>ingens</i>		
Admiralty Islands		
Wing	165, 168, 170, 170, 173, 173	164, 164.5, 165, 165, 166, 167, 169, 170, 174
Bill	37, 38, 38, 38, 38.5, 39	

and New Hanover). *Coracina p. ingens* Rothschild and Hartert (1914, Novitates Zool., vol. 33, p. 107) from Manus and Los Negros, Admiralty Islands, agrees in color with *sclateri* but is still larger and has a bigger bill. The shafts of the tail-feathers are black underneath. The species is not found on any of the smaller islands east of New Ireland or north of New Hanover. (For further notes on the species, see Rothschild and Hartert, 1916, Novitates Zool., vol. 23, p. 289-291.)

Colonization of the Solomon Islands probably took place from eastern New Guinea. The large size of the birds from the Bismarcks suggests that they are earlier endemics.

Coracina lineata

The Bismarck Archipelago race, *sublineata* Sclater, is on the whole similar to *axillaris* of New Guinea. Adult males, however, have invariably a trace of barring on abdomen, flanks, and under tail-coverts which is quite pronounced in some specimens (notwithstanding Hartert, 1925, Novitates Zool., vol. 32, p. 132). The light edges on the primaries are more pronounced and the white bars of the axillaries tend to be wider. Females are rather variable in *sublineata* and *axillaris*, and New Britain birds fall within the range of variation of New Guinea specimens. A single female from New Ireland does not differ conspicuously from a New Britain series. A male from New Ireland has as little barring underneath as the least barred specimen from New Britain. Wing, New Britain, male: 136, 139, 140, 140, 142; female: 133, 134, 135, 137.5, 139, 143. Wing, New Ireland, male: 142; female: 139.

RANGE: Bismarck Archipelago: New Ireland (type locality) and New Britain. Unknown from any other island.

The six subspecies known from the Solomon Islands (Mayr, 1945, p. 249) are similar to one another and to *sublineata*. The males are all gray except in *makirae* from San Cristobal. The females vary in the width of the black, gray, and white bars underneath, with those of *solomonensis* and *ombriosa* most blackish and those of *nigrifrons* and *malaitae* with the width of the black bars most reduced and the greatest extent of gray on the abdomen.

The isolated population on Rennell Island (*gracilis* Mayr, 1931) lacks sexual dimorphism, and the male is barred black and white on flanks, abdomen, and under tail-coverts, exactly like the female. In view of the similarity of this population to nominate *lineata* from Australia, it is possible that Rennell was colonized directly from Australia. The presence of several other Australian elements on Rennell strengthens this supposition.

Coracina caledonica

The taxonomic position of this species has been discussed by Ripley (1941, Auk, vol. 58, p. 386). The absence of the species from the New Guinea area (I do not consider *caeruleogrisea* to belong to it) and from the Bismarck Archipelago suggests that it reached the Solomon Islands from New Caledonia via the New Hebrides. The three races in the Solomon Islands (Mayr, 1945, p. 250) are very similar to one another. Unpublished manuscript notes by Mayr and Ripley define them as follows:

"Coracina caledonica welchmani (Tristram)

"Graucalus [Artamides] welchmani TRISTRAM, 1892, Ibis, p. 294: Bugotu, Isabel Island, Solomon group.

"SUBSPECIFIC CHARACTERS (ADULT MALE): Differs from *thilenii* (northern New Hebrides) by having a larger bill and shorter tarsus; upper parts more grayish, rather than bluish slate; lores, auricular and malar area glossy black, not dull, the black carried back over the eye much more prominently to form a distinct superciliary streak; chin and throat glossy black, carried down in two specimens to the upper breast; under wing and tail-coverts less dark, slate colored rather than blackish slate.

"The adult female differs in the same respects as the male except that there is no black around the head and throat except in the ear region. Culmen, 32–34; tarsus, 30, 31; relative tail length, 80–84 per cent of wing length.

		WING	TAIL
Isabel	4 ♂ ad.	184–190.5 (186.8)	149–159.5 (154.3)
	6 ♀ ad.	175–184.5 (180.7)	142.5–154 (149.2)
Fara	1 ♂ ad.	190	157

"RANGE: Ysabel and Fara, Solomon Islands.

"In this race sexual dimorphism has become much more pronounced than in races from southern Melanesia, the male not only having a black throat in contrast to the female's gray one, but also the black, in contrast to the male of *thilenii*, has become glossy with traces of iridescent reflections.

"Coracina caledonica bougainvillei (Mathews)

"Artamides welchmani bougainvillei MATHEWS, 1928, Novitates Zool., vol. 34, p. 373. Bougainville Island.

"SUBSPECIFIC CHARACTERS (ADULT MALE) : Similar to *welchmani* but slightly smaller and paler; crown darker; black on upper breast slightly more extensive. The female is very slightly paler and smaller than that of *welchmani*.

"From *kulambangrae* this race differs by being smaller and paler and by having the black of the throat carried down through the upper breast in the male. Culmen, 30; tarsus, 32; relative tail length, 82, 83 per cent of wing length.

		WING	TAIL
Bougainville	5 ♂ ad.	179.5-188 (184.4)	149-155.5 (152.8)
	1 ♀ ad.	169	145

"RANGE: Bougainville Island, Solomon Islands.

"Although this race has most of the characters of *welchmani*, from which it differs principally in size, it also has the darker crown which is so noticeable in *kulambangrae*.

"*Coracina caledonica kulambangrae* (Rothschild and Hartert)

"*Graucalus welchmani kulambangrae* ROTHSCILD AND HARTERT, 1916, Novitates Zool., vol. 23, p. 289: Kulambangra Island.

"SUBSPECIFIC CHARACTERS (ADULT MALE) : Similar to *welchmani* but darker; upper parts more bluish, particularly on the crown; black on the lower parts restricted to chin and throat, not carried down to the upper breast; under-wing and tail-coverts darker, more slate-black; bill as in *welchmani* but somewhat more slender.

"The adult female has a little more black in the ear region and a more slender bill, but otherwise is indistinguishable from that of *welchmani*. Culmen, 31-35.5; tarsus, 31-33; relative tail length, 83-91 per cent of wing length.

		WING	TAIL
Kulambangra	7 ♂ ad.	180.5-191.5 (185.6)	160-176 (165.4)
	6 ♀ ad.	175-185 (179.2)	157.5, 167
Vangunu	2 ♂ ad.	181, 188	160, 170
New Georgia	7 ♂ ad.	180.5-190 (186.2)	157-169 (164.6)
	5 ♀ ad.	175-180 (178.1)	157-161.5 (156.7)

"RANGE: Vangunu, New Georgia, and Kulambangra, Solomon Islands."

Coracina novaehollandiae

Individuals of this Australian species, and in particular of the subspecies *melanops*, reach the Papuan region during migration and have

been encountered not infrequently in northern Melanesia. The American Museum has specimens from the following localities: Vitu (French Islands), female, June 4, 1925; Rook Island, male, August 2, 1913; and Nissan (Green Islands), male, August 9, 1929. Other recent records are: Bougainville, August 31, 1944 (Baker, 1948, Smithsonian Misc. Coll., vol. 107, no. 15, p. 17). See also O. Meyer (1937, Ornith. Monatsber., vol. 45, p. 51). (For further notes on the migration of this species, see White, 1938, Bull. Brit. Ornith. Club, vol. 58, pp. 72-75.)

THRUSHES (TURDIDAE)

Only a few essentially Palearctic or Indian genera of this family have reached the Australo-Papuan region. Three species or species groups occur in northern Melanesia.

Turdus poliocephalus

This widespread species has a peculiarly spotty distribution in the area. It is absent from the Bismarck Archipelago, except for *T. p. heinrothi* Rothschild and Hartert (1924, Bull. Brit. Ornith. Club, vol. 44, p. 53) of St. Matthias Island. This race differs from *papuensis* by its browner head and shorter wing. The Whitney South Sea Expedition did not encounter the species anywhere in the Bismarcks. In the Solomon Islands it is known from Bougainville and Kulambangra (Mayr, 1941, Amer. Mus. Novitates, no. 1152, p. 6) and from Rennell Island (Mayr, 1931, Amer. Mus. Novitates, no. 486, pp. 21-22). The colonization presumably took place from the New Guinea area. This species is noted for the irregularity of its geographical variation and for the fact that among very similar subspecies one may live in high mountains, while a neighboring one occurs near the seashore.

Zoothera dauma GROUP

The distribution of this species group in northern Melanesia is even more spotty and irregular than that of *Turdus*. It is a rather rare bird, where it occurs, and hard to collect. So far it has been taken only four times in the area. Two of the races are, on the whole, similar to *Z. d. papuensis*, namely, *heinrothi* (St. Matthias) and *choiseuli* (only type known). (See Hartert, 1924, Novitates Zool., vol. 31, p. 273.) Two other forms of the species group are more distinct. *Zoothera (dauma) talasea* Rothschild and Hartert (only type known; see Hartert, 1926, Novitates Zool., vol. 33, p. 141) was originally described as a full species and may well deserve that status. It differs quite strikingly from all the subspecies of *Z. dauma* by its small size and slate gray coloration. Even

more distinct in coloration and proportions is the very isolated *Zoothera margaretae* Mayr of San Cristobal (1935, Amer. Mus. Novitates, no. 820, p. 4; 1936, *ibid.*, no. 828, pp. 14–15). It has the aberrant characteristics of so many peripherally isolated populations. Additional undescribed forms may yet turn up on Guadalcanal, New Ireland, and other of the higher islands.

Saxicola caprata

This species is found in the Bismarck Archipelago only on New Britain. It also occurs on Long Island off the coast of New Guinea. The available material, which includes only a single adult female from New Britain, does not permit any decision as to whether or not the New Britain population is different in color from that of the north coast of New Guinea. Measurements of males are: wing, New Britain, 69.5, 70, 70.5, 75; Long Island, 75, 76, 76; tail, New Britain, 53, 54, 54, 55; Long Island, 55, 55, 55.5. The type locality of *S. c. aethiops* Sclater (1880, Proc. Zool. Soc. London, p. 66) is Kabakadai, New Britain. The birds from the lowlands of north New Guinea tend to average a little larger (see Mayr and Gilliard, 1951, Amer. Mus. Novitates, no. 1524, p. 8).

WARBLERS (SYLVIIDAE)

Eight species of warblers are known from northern Melanesia. This includes three endemic species. Nothing further has become known of *Vitia parens* since the full description of this species (Mayr, 1936, Amer. Mus. Novitates, no. 828, p. 15).

Ortygocichla rubiginosa was collected by Coultas on New Britain. This valuable series consists of nine specimens, two of which are in molt.

Wing, male, 78, 78, 79, 80, 80; female, 70, 76

Tail, male, 72, 79, 82, 83, 85; female, 75, 79

There is no difference in coloration between male and female. The status of this genus was discussed earlier (Mayr, 1933, Amer. Mus. Novitates, no. 590, p. 4). Its precise classification must be postponed until the whole group of babblers-warblers to which it belongs has been revised. It appears to be a relict of a once more widespread group, including "*Trichocichla*" *rufa* Reichenow of Fiji.

The geographic variation of *Acrocephalus stentoreus* was discussed earlier (Mayr, 1948, Emu, vol. 47, pp. 205–210) and the northern Melanesian population determined as *cervinus*. The species has been found in recent years on Bougainville (Virtue, 1947, Emu, vol. 46, p.

329) in addition to the previously known stations on Ysabel and Guadalcanal. Stresemann and Arnold (1949, Jour. Bombay Nat. Hist. Soc., vol. 48, pp. 428–443) have shown that *A. stentoreus* is not conspecific with *A. arundinaceus* (for a map of the eastern forms, see Stresemann, 1939, Jour. Ornith., vol. 87, p. 324).

The grass warbler, *Cisticola exilis*, is widespread in the Bismarck Archipelago. It has long been known from New Britain, New Ireland, New Hanover, and Lihir Island, but Coultas has recorded it also from Rook Island, Massahet (Lihir group), and Tabar Island. The populations from the Bismarck Archipelago differ appreciably from *diminuta* and have been described as *polionota* (Mayr, 1934, Amer. Mus. Novitates, no. 709, p. 14). It is characterized by the lack of an eclipse plumage (for a map, see Stresemann, 1939, Jour. Ornith., vol. 87, p. 323).

Megalurus timoriensis occurs on New Britain, New Ireland, and New Hanover. The endemic subspecies *interscapularis* was discussed by Hartert in 1925 (Novitates Zool., vol. 32, p. 134) and 1930 (*ibid.*, vol. 36, p. 80). No additional specimens are available to add to this discussion.

Three species of *Phylloscopus* are known from northern Melanesia. One of these (*amoenus* Hartert) is an endemic restricted to Kulam-bangra, Solomon Islands. It is obviously a member of the *P. trivirgatus* group but represents an earlier wave of immigration. It now lives side by side with *P. t. pallescens*. In the original description (1929, Amer. Mus. Novitates, no. 364, p. 12) *amoenus* was made the type of a separate genus, *Mochthopoeus* Hartert. This genus is not valid (Mayr, 1944, Amer. Mus. Novitates, no. 1269, p. 4).

The species *P. trivirgatus* ranges from Malaysia through the Papuan region to the Solomon Islands. It is known in the Solomon Islands from every higher island except Guadalcanal, where its discovery is to be expected as soon as a party reaches the mountains. The four endemic subspecies were described by Mayr in 1935. In the Bismarck Archipelago it has so far been found only on St. Matthias (*matthiae* Rothschild and Hartert, 1924, Bull. Brit. Ornith. Club, vol. 44, p. 52). The mountains of New Britain and New Ireland are high enough for this species, and it is therefore surprising that it has never been encountered there by collectors. *Phylloscopus amoenus* and *trivirgatus* evidently reached northern Melanesia from New Guinea by double invasion (Mayr, 1944, *ibid.*, no. 1269, p. 5).

The Whitney South Sea Expedition added a new species to the list of the Bismarck Archipelago when W. F. Coultas collected a specimen of *Phylloscopus borealis* in the Anchorite Islands, on May 21, 1934. It is an

adult male (wing, 68.5; tail, 48.5; culmen, 14.5). In its coloration of the upper parts and long bill it agrees best with *kennicotti* Baird. However, it is not with certainty separable from nominate *borealis* Blasius.

FLYCATCHERS (MUSCICAPIDAE)

This family is represented in northern Melanesia by more species than any other family of song birds. The flycatchers are for the most part an old endemic faunal element of Melanesia and have undergone a great deal of speciation. The more than 20 species occurring in the area belong to three groups: (1) fantail flycatchers (*Rhipidura*), (2) monarch flycatchers (*Monarcha*, *Myiagra*), and (3) robin flycatchers (*Petroica*, *Monachella*). The last-named tribe intergrades almost imperceptibly with the whistlers (*Pachycephala*).

GENUS RHIPIDURA

The Solomon Islands species of the genus were monographed earlier (Mayr, 1931, Amer. Mus. Novitates, no. 502, pp. 1-21), and no new material has since been received that would permit additions to this revision. This includes the species *leucophrys*, *cockerelli*, *rennelliana*, *drownei*, *tenebrosa*, and *flabellifera* (see also Mayr, 1945, pp. 253-256).

Rhipidura rufifrons

A study on character geography and evolution in the *rufifrons* group has been published (Mayr and Moynihan, 1946, Amer. Mus. Novitates, no. 1321, pp. 1-21, 6 figs.). In addition to the species *rufifrons*, the group consists of *matthiae* (St. Matthias), *dahli* (New Britain, New Ireland), and *malaitae* (Malaita). The various subspecies of *rufifrons* in the Solomon Islands (*commoda*, *granti*, *brunnea*, *rufofronta*, *ugiensis*, *kuperi*, and *russata*) are a single stock, even though some of the eastern forms (particularly *russata* and *ugiensis*) are fairly aberrant. The peculiar *semi-rubra* of Manus, Admiralty Islands, is an early and very isolated offshoot from this stock (see Mayr and Moynihan, 1946, *ibid.*, no. 1321, fig. 2).

Rhipidura leucophrys melaleuca Quoy and Gaimard

A list of the islands in the Solomons from which this species has been recorded was published in the *Rhipidura* revision (Mayr, 1931, Amer. Mus. Novitates, no. 502, p. 3). In the Bismarck Archipelago the species has been recorded from Rook Island, Witu (French Islands), New Britain,¹ Duke of York Islands, New Ireland (type locality), Lihir,¹

¹ Collected by the Whitney South Sea Expedition.

and Tabar.¹ This otherwise so widespread species seems to be absent from the Admiralty Islands, St. Matthias, and Nissan and Feni Islands.

Rhipidura rufiventris

This widespread Papuan species was last reviewed by Stresemann (1914, *Novitates Zool.*, vol. 21, p. 130) and by Hartert (1918, *Bull. Brit. Ornith. Club*, vol. 38, pp. 58-59). It is common and diversified in the Bismarck Archipelago which it undoubtedly reached from New Guinea. In spite of its uniform distribution, it has, curiously, been unable to reach the Solomon Islands.

The following six races occur in the Bismarcks.

Rhipidura rufiventris finschii Salvadori

Very similar to *gularis* from New Guinea, and belonging to the group with buff abdomen. Differs by having the back purer and lighter gray and the white margins of secondaries and tertiaries broader.

RANGE: New Britain and Duke of York Islands.

Rhipidura rufiventris mussaui Hartert

The endemic subspecies of St. Matthias (Hartert, 1924, *Novitates Zool.*, vol. 31, p. 271) differs from all neighboring populations by its buff abdomen and large bill. It differs from *finschii* by having the breast band much darker, blackish gray, and likewise by its slate gray back and blackish crown. The light edges of the secondaries are narrower. Except for the buff abdomen, it is similar to *niveiventris* from Manus, which, however, has the back somewhat lighter gray.

RANGE: St. Matthias Island.

Rhipidura rufiventris setosa Quoy and Gaimard

Birds from New Ireland differ from *finschii* by their pure white abdomen and by having the breast band a little paler gray, more ashy. The upper parts likewise are a little more ash gray, with the crown contrasting less with the back. There seems to be no conspicuous difference with respect to the extent of white in the tail, but the white edges on the secondaries appear to be wider in New Britain birds.

RANGE: New Ireland and New Hanover.

New Hanover birds had been originally described by Hartert as a separate race (*albertorum*) under the mistaken impression that New Ireland birds had a buff belly like those of New Britain. Hartert himself subsequently corrected the mistake (1925, *Novitates Zool.*, vol. 32, p. 130) and synonymized *albertorum* with *setosa*.

¹ Collected by the Whitney South Sea Expedition.

Rhipidura rufiventris niveiventris Rothschild and Hartert

Differs from the other white-bellied forms by the dark gray color of back and breast band. The crown is black, merging into the slate gray of the back; only the greater upper wing-coverts have a very narrow outer edge of white which is absent in worn specimens. It is large, with a rather big bill.

RANGE: Manus, Admiralty Islands.

Rhipidura rufiventris gigantea Stresemann

The subspecies of Lihir Island was discovered by O. Meyer and described by Stresemann (1933, Ornith. Monatsber., vol. 41, p. 115). It differs from other members of the group with white abdomen chiefly by its larger size. It differs from *setosa* (New Ireland) by the much darker breast band, the dark slate-colored back, and the blackish crown. The white edges of tertials and secondaries are pronounced, and the white tips of the tail-feathers are wide and well defined. A series from Tabar Island agrees in coloration with Lihir birds except that the breast band is apparently narrower and paler gray.

RANGE: Lihir group (Lihir Island only) and Tabar group (Tabar Island).

Differs from *niveiventris* by larger size and by having breast band and back of paler, more ashy gray. More white on outermost tail-feathers.

Rhipidura rufiventris tangensis, new subspecies

TYPE: A.M.N.H. No. 335633; adult male; Boang Island, Tanga group; February 4, 1935; Whitney South Sea Expedition (W. F. Coultas).

The population from Boang, Tanga, differs from *gigantea* by being much paler above. The back is ash gray and the crown only slightly darker. The color is even lighter than in *setosa* from New Ireland. The pale edges on secondaries and tertials are very narrow. The abdomen is very lightly washed with buff, not pure white.

RANGE: Boang, Tanga Islands.

The birds from this island combine, somewhat, the characters of several of the neighboring races.

GENUS *MONARCHA*

There are four species groups of monarch flycatchers in northern Melanesia: the chestnut-bellied monarchs (*cinerascens*, *castaneiventris*, *richardsi*), the pied monarchs (*barbata*, *verticalis*, *infelix*, *menckei*), the glossy monarchs (*hebetior*, *alecto*), and the golden monarch (*chryso-mela*). The species that occur in the Solomons have been described in Mayr, 1945 (pp. 256-258).

TABLE 3
MEASUREMENTS OF *Rhipidura rufiventris* FROM THE BISMARCK ARCHIPELAGO

	Males	Females
New Britain ^a		
Wing	82, 83, 84, 85, 86, 87, 88, 89, 89, 89, 90, 91, 93	
Tail	83.5, 85, 85, 86, 86, —, 87, 88, 88, —, 89, 90, 92.5	
New Ireland		
Wing	86.5, 90.5, 90.5, 92	82, 84, 90
Tail	86, 87, 87, 90	84, 85, 87
New Hanover		
Wing	87, 87, 90, 91	80, 84
Tail	82, 85, 85, 88	80, 80
St. Matthias		
Wing	86, ^b 86, ^b 90	82, ^b 87, 87, 87
Tail	82, ^b 83, 83 ^b	81, ^b 82, 82.5, 83
Admiralty Islands		
Wing	88, 88, 89.5, 90.5, 90.5, 92, 92, 92.5	
Tail	82, 82, 84, 84.5, 85, 86, 89, 89	
Lihir		
Wing	91, 91, 92, 93, 94.5, 95, 95.5, 96, 96, 96.5, 96.5	87, 88, 88, 88.5, 89
Tail	87, 87.5, 88, 90, 91, 91, 91, 92, 93, 94, 95	85, 85, 87, 87, 87.5
Tabar		
Wing	92, 93, 94, 95.5	
Tail	92, 93, 93.5, 94	
Boang, Tanga		
Wing	90, 90, 90.5, 91	84
Tail	81, 82, 83, 83	81

^a Birds in first year plumage are not always easily identified, and the specimens here listed with small measurements are apparently first year birds.

^b Immature.

Monarcha castaneiventris and *richardsi*

These two species are members of a more widespread superspecies to which also belong *M. melanopsis* (Australia) and *M. frater* (New Guinea). This superspecies is not represented in the Bismarck Archipelago.

The form of the central Solomons, *M. richardsi*, is distinguished not only by its snow-white nape but also by having a juvenile plumage, which

differs conspicuously from the adult plumage: all parts of the plumage that are black in adults are gray. These immatures are very similar to *M. cinerascens*. The pronounced speciation in the Solomon Islands indicates that the group was among the earlier immigrants.

Monarcha cinerascens

This species is exceedingly difficult to handle, as has been pointed out by every student of this group. The bird is, in the main, restricted to small islands and to the shoreline of larger islands. Virtually in every locality a population is found that differs slightly in the color of the chestnut abdomen or the gray throat and back, as well as in general size and bill length. Nothing would be gained by naming all these variants. Deviating populations occur particularly on the very small islands (such as Talele, Tench, Vuatom) where the population, consisting of only a few individuals, is strongly affected by inbreeding as well as by the occasional arrival of a stray from a distance (see Mayr, 1944, Bull. Amer. Mus. Nat. Hist., vol. 83, pp. 162–163).

Within the area of northern Melanesia it is best to recognize only three races: a very pale one (*perpallidus*), an intermediate one (*fulviventris*), and a dark one (*impediens*).

Monarcha cinerascens perpallidus Neumann

This race, which is characterized by the cinnamon buff abdomen, was described from Nusa near Kavieng, at the northern tip of New Ireland (1924, Ornith. Monatsber., vol. 32, p. 39). There is a certain amount of variation in this race. The palest specimens come from St. Matthias and Squally Islands. A bird from New Hanover is slightly darker, and birds from New Ireland (type locality), Lihir Island (Lihir group), and Tabar are still richer, approaching *fulviventris* in coloration. Two such specimens from Tench Island (St. Matthias group), perhaps even closer in color to *fulviventris*, were described by Sibley (1946, Condor, vol. 48, pp. 281–282) as a separate subspecies (*tenchi*). Because I feel that recognition of a separate form on this island would obscure the picture of the general trend of variation in this species, I propose to unite it with *perpallidus*, with which it agrees in general size and geographically. An adult male from Talele, off the coast of New Britain, is also dark but perhaps closer to *perpallidus* than to typical *fulviventris*.

RANGE: St. Matthias group, New Hanover, New Ireland, Lihir (Lihir group), Tabar (Tabar group), ?Talele (New Britain).

Monarcha cinerascens fulviventris Hartlaub

Birds from Ninigo (type locality), Hermit, and Anchorite Islands are darkest and largest. Birds from San Miguel, Nauna, and Rambuty

in the Admiralty Islands are very slightly paler and smaller. Yet it would serve no useful purpose to separate this population, which is somewhat intermediate with *perpallidus*.

RANGE: Ninigo, Hermit, Anchorite, and Admiralty Islands.

Monarcha cinerascens impediens Hartert

This is the darkest of the three races (1926, *Novitates Zool.*, vol. 33, p. 40). It extends from the islands in the east of New Ireland [Malie and Sinabiet (Lihir group), Tanga, and Feni] to the eastern Solomons. In the Solomons it occurs on many islands. Nearly all of these are small, although in a few cases they are immediately adjacent to larger islands. There is a great deal of slight geographic variation in the chestnut color of the abdomen and the gray throat and back—a variation which is too slight, however, for subspecific separation. The choice of the type locality (Feni) is somewhat unfortunate because it is near the northwestern end of the range, and the Feni population shows a certain influence from the neighboring paler populations (*perpallidus*). The bill of Feni birds also averages larger. Birds from Nissan are more typical for the Solomon Islands populations.

The Solomon Islands birds differ from *rossellianus* by a shorter bill and a somewhat deeper chestnut abdomen; the gray portions of the plumage are duller, darker, and more slaty, particularly on the sides of the head; there is no black on chin or forehead.

With respect to the chestnut color of the abdomen, birds from Ramos Island are particularly dark and birds from Arnavon Island particularly light. The birds from the islands along the north coast of Ysabel are quite dark. Birds from the small islands in Bougainville Strait are comparatively light. Even birds from isolated Ongtong Java are not separable in color from the other populations, nor are those from Sikaiana (Th. Kleinschmidt coll., Hamburg Museum).

Birds from Malie and Sinabiet, Lihir Archipelago, and from Boang, Tanga, cannot be separated clearly from *impediens* (Feni Island). Hartert quite correctly classifies specimens from the Witu Islands also as *impediens* (1926, *Novitates Zool.*, vol. 33, p. 177).

(For measurements, see table 4, p. 26.)

Superspecies *Monarcha verticalis*

The species group to which *verticalis* belongs is one of the most interesting from the point of view of speciation. To it belong unquestionably *barbatus*, *menckei*, *infelix*, and *brehmi* (Biak). In the north (Micronesia) *godeffroyi* (Yap) is undoubtedly a member of it, as are possibly also *takatsukasae* (Tinian) and *Metabolus rugensis* (Truk), although the latter also indicates relationship with *Clytorhynchus*. The question of

TABLE 4
MEASUREMENTS OF *Monarcha cinerascens*

	Males	Females	Unsexed
Ninigo			
Wing	88, 91	87	
Tail	75, 75	74	
Bill	—, 22.6	21.4	
Hermit group			
Wing	89, 91.5	86	
Anchorite			
Wing	87, 90.5		
Rambutyo			
Wing	83, 83.5, 83.5, 87, 87, 87	81.5, ^a 84, 84.5, 86, 86.5	
Bill	21.6, 21.7, 21.8, 21.8, 22, 22		
Nauna			
Wing	87		
Talele			
Wing	84.5, 87		
Bill	20.5, 21.9		
St. Matthias			
Wing	81, 83.5, 84, 85, 85, 86, 86	79, 82, 84	
New Hanover			
Wing		78	
New Ireland			
Wing			83
Tabar			
Wing	84, 85	84	
Bill	20, 20.5	20	
Lihir			
Wing		87	
Bill		20	
Malie Island,			
Lihir group			
Wing	88, 88, 88, 88.5, 89, 90	83, 85, 85.5	
Sinabiet, Lihir group			
Wing	89, 89	86, 87	
Boang, Tanga			
Wing	84, 90	82 ^b	
Feni Island			
Wing	87, 81, ^b 84, ^b 85 ^b	83, 84.5	
Tail	72, 67, ^b 67.5, ^b 68 ^b	70, 71.5	
Bill	21.5, 20, ^b 20.5, ^b 21.5 ^b	20.5, 22	

TABLE 4—*Continued*

	Males	Females	Unsexed
Nissan			
Wing	83.5, 84, 85, 86.5, 86.5, 87, 87, 87, 88, 88, 89, 89, 89, 89, 90		
Bill	20.5, 20.8, 21, —, —, 21, 21, 21		
Whitney Island, etc.			
Wing	84, 85, 86, 86, 86, 87, 87, 88, 88, 89, 89, 89, 89.5, 92	84, 85, 87, ?87, 88, 89	
Arnavon Island			
Wing	85, 87, 87, 87	84, 84, 84.5, 85	
Gijunabena-Fara			
Wing	87, 87.5	82.5, 84, 85	
Ramos			
Wing	84, 86, 87, 87, 88, 89	81, 83	
Bill	20.5, 20.5, 21, 21		
Murray Island			
Wing	88.5, 92	86, 87	
Gower Island			
Wing	84, 85.5, 86, 86, 87, 88, 89	83, 84.5, 85, 86, 87, 87	
Ongtong Java			
Wing	90	86	
Bill	20.5	20.5	

^a These five females came from San Miguel.

^b Juveniles.

relatives in the Papuan area is more complex. There are two groups that seem to qualify for possible relationship, the *leucurus-manadensis* group and the *trivirgatus-guttula* group. I have explained elsewhere why I consider the *manadensis* group the representative of *verticalis* (1944, Bull. Amer. Mus. Nat. Hist., vol. 83, p. 162).

So many of the populations of this group are on the borderline between subspecies and species that it is a "toss-up" whether one wants to include all the Solomon Islands forms in a single species (*barbatus*), or to recognize three, *barbatus* (with *malaitae*), *browni* (with *meeki*, *ganongae*, and *nigrotectus*), and *vidua* (with *squamulatus*), all allopatric. The characters of these forms and their distribution are stated in Mayr (1945, pp. 257–258).

In the Bismarck Archipelago the situation is simpler. The gaps between the three allopatric species are rather wide, and there is little doubt that they should be treated as full species.

Monarcha verticalis Sclater

This species is characterized by a strong tuft of elongated feathers on the forehead and fore part of the crown, separated by white feathers from the remainder of the crown. The tail feathers are either pure black or have some faint white tips on the outermost feather. The rump is white, and there is some white on the median and inner greater upper wing-coverts. The white ear-coverts completely separate the black area of the throat from that of the nape.

RANGE: Rook, New Britain, Duke of York Islands (type locality), New Ireland, and New Hanover.

It is rather odd that no subspecies have formed in this species, which belongs to a group elsewhere strongly inclined to geographic variation.

Monarcha infelix

The birds of the Admiralty Islands are strongly characterized. There are two well-defined subspecies.

Monarcha infelix infelix Sclater

In this species there is no strong modification of the feathers of the forehead; they grade into those of the crown without being separated by a zone of white feathers. The rump is black, not white as in *verticalis*, and there is much white in the tail (the fourth to sixth tail-feathers are all white, the third is largely white, and the second is partly white). Only the central tail-feather is usually all black. The black of the throat is much more extensive, extending to the upper breast and to the sides of the breast.

RANGE: Manus, Admiralty Islands.

On Rambutyo an interesting population occurs which resembles *infelix* and can be considered as only subspecifically different. This strikingly different subspecies may be named:

Monarcha infelix coultasi, new subspecies

TYPE: A.M.N.H. No. 335263; adult male: Rambutyo Island, Admiralty Islands; March 24, 1934; Whitney South Sea Expedition (W. F. Coultas).

Similar to *infelix* but most of tail white. Only the two innermost tail-feathers with black tips. Lower back and rump partly white. Extent of

white on the wing-coverts reduced. No white on tertials. Axillaries and under wing-coverts white; the white on the sides of the head meets in many specimens on the nape.

Named in honor of W. F. Coultas who has contributed so much to our knowledge of the ornithology of the Bismarck Archipelago.

The females are similar to the males but the plumage is somewhat duller; the black on central tail-feathers is more extensive.

TABLE 5
MEASUREMENTS OF *Monarcha infelix*

	Males	Females
Rambutyo Island		
<i>(coultasi)</i>		
Wing	83, 84, 84, 84, 86, 86, 87, 88, 88	78, 79, 81, 83
Tail	73, 73, 74, 75, 75, 76, 77, 77.5, 78	69, 70, 70, 71
Manus <i>(infelix)</i>		
Wing	81.5, 82, 82, 83, 83, 83, 83, 84, 84, 84, 84, 85, 85, 86, 87	77, 78, 79, 82, 82, 83, 85 (♂?)
Tail	69, 71, 71.5, 72, 73, 73, 73, 73.5, 74, 75, 75, 76.5, 78	67, 69, 70, 70, 72, 75, —

Monarcha menckei Heinroth

This species clearly belongs to this group, but it differs so strikingly that it well deserves species rank. The black throughout is reduced in favor of white (except on the tail). The portions of the plumage that remain black are the uppermost throat, the forehead and lores, the feathers around the eye, a spot on the ear-coverts, the wing-feathers, the central two pairs of tail-feathers, and the bases of the lateral tail-feathers.

RANGE: St. Matthias Island.

Monarcha alecto and *hebetior*

These two species offer two taxonomic problems. The first is the problem of their relationship. They are so similar, particularly in the male plumage, that *hebetior* was not recognized as a separate species until 1924 (Hartert, Novitates Zool., vol. 31, pp. 208, 270). The two species co-exist through the main chain of the Bismarcks from New Hanover to New Britain (*eichhorni*), yet on St. Matthias only *hebetior* is found.

This form poses a real taxonomic problem. The male of *hebetior* seems almost closer to *alecto*, the female has the coloration of back, crown, and under parts of *alecto*, but the tail pattern of *eichhorni*. These facts suggest the probable history of speciation. *Monarcha alecto* is a widespread species, ranging from the northern Moluccas and Tenimber to Australia and the Bismarck Archipelago. On St. Matthias the endemic *hebetior* evolved, which subsequently reinvaded the Bismarcks to become *eichhorni*. If this is the correct interpretation, it has a close parallel in a similar case of speciation in the flowerpecker genus *Anaimos* (Borneo and Palawan) (Mayr and Amadon, 1947, Amer. Mus. Novitates, no. 1360, p. 16).

This still leaves open the nomenclatural treatment of this complex situation. The best solution would seem to be to retain the established taxonomy, namely, to treat *eichhorni* as a subspecies of *hebetior*, and the latter as a separate species from *alecto*.

The second problem is how to treat a great deal of slight variation within each species.

Monarcha hebetior eichhorni Hartert

Birds from New Ireland appear to be in the female plumage a little brighter orange rufous on the back and a little paler and to average smaller than birds from New Britain. The difference is too slight for subspecific discrimination.

Monarcha alecto chalybeocephalus Garnot

Males are indistinguishable throughout the range. Females vary considerably. Palest are those from New Ireland; darker are those from New Hanover, New Britain, and Rook; still darker are those from Feni and the French Islands (Unna); and four females from the Admiralty Islands are darkest, darker than the darkest New Britain birds. They differ from *rufolateralis* (Aru Islands) by being brighter reddish above, with less gray on the upper back. A full discussion of geographic variation in this species was given earlier (Mayr, 1941, Amer. Mus. Novitates, no. 1133, p. 3).

In view of the rather slight difference, the intermediacy of most populations, and the irregularity of the distribution pattern, it would seem advisable not to subdivide *chalybeocephalus*.

RANGE: All New Guinea, western Papuan islands, islands of Geelvinck Bay, Dampier Island, Rook, French Islands, New Britain, New Ireland, New Hanover, Admiralty Islands (Manus, Rambutyo), Tabar, Tanga, and Feni.

The arrival of the species from New Guinea is evident. It did not reach the Solomon Islands.

Monarcha chrysomela

This otherwise strictly Papuan species occurs again in the northern Bismarck Archipelago (New Ireland and neighboring islands). How it got there and why it is absent on New Britain is a puzzle. The Biak race *kordensis* is somewhat similar to nominate *chrysomela*, but it is uncertain whether this is owing to direct relationship or to parallelism.

Monarcha chrysomela chrysomela Lesson

Differs from the New Guinea races by having the black of the back in part replaced by golden yellow. Only the upper back is black, whereas lower back and scapulars are more or less orange-yellow. Occasionally even the upper back is mottled with orange.

RANGE: New Ireland (type locality) and New Hanover.

Monarcha chrysomela whitneyorum, new subspecies

TYPE: A.M.N.H. No. 336052; adult male; Lihir Island, Lihir group; September 17, 1934; Whitney South Sea Expedition (W. F. Coultas).

Differs from *chrysomela* in the male plumage by being somewhat less reddish orange on the crown and particularly more yellowish on rump, scapulars, and under parts. The upper wing-coverts and scapulars are not mixed with blackish, and the yellow on the tertials is more extensive, spreading onto the inner web. The females are more greenish yellow, less golden orange-yellow. Crown and upper parts are of a darker greenish olive, and the throat has a more pronounced greenish tint. Size larger, tail relatively larger (84% of wing, against 80% in *chrysomela*).

RANGE: Lihir Island, Lihir group.

It gives me great pleasure to name this handsome bird in honor of the Whitney family, three generations of which have sponsored exploration and zoological research in the most generous manner.

Monarcha chrysomela tabarensis, new subspecies

TYPE: A.M.N.H. No. 335534; adult male; Tabar Island, Tabar group; January 14, 1935; Whitney South Sea Expedition (W. F. Coultas).

This population carries the trend indicated by *whitneyorum* one step farther. The yellow parts in the adult male are of a rich chrome color but without red wash on the crown. The black area on the mantle is perhaps even more reduced. Females are very similar to Lihir females but even greener, particularly on the crown, and with no visible yellow

wash on forehead and lores. Breast and abdomen are as yellow as in Lihir birds but not so rich as in *chrysomela*. Throat and sides of throat lack the greenish tint of *whitneyorum* and the golden orange of *chrysomela*. Size intermediate between that of *chrysomela* and that of *whitneyorum*, but without long tail.

RANGE: Tabar Island, Tabar group.

TABLE 6
MEASUREMENTS OF THE BISMARCK ARCHIPELAGO POPULATIONS OF
Monarcha chrysomela

	Males	Females
New Ireland		
Wing	71.5, 71.5, 72, 72, 73, 74, 75, 76	71.5, 72, 73, 73, 73
Tail	55, 58, 58, 58, 58, 59, 60, 60	59, 59.5, 60, 60, 60, 62
New Hanover		
Wing	70, 71, 73, 73.5, 74	71.5, 72, 73
Tail	56, 58, 58.5, 58.5	58, 59, 60
Lihir		
Wing	77.5, 78, 78, 79, 79, 79, 79.5, 79.5, 80, 80, 80	76, 76.5, 76.5, 78, 78.5, 79, 79, 79
Tail	64, 64, 65, 66, 66, 66, 66.5, 67, 67, 67, 67, 67.5	61, 63.5, 64, 64.5, 65, 65.5, 66, 67
Tabar		
Wing	73, 75, 76, 76, 78	73, 73.5, 73.5, 74
Tail	62, 63, 63, 63	60, 60.5, 61, 61.5

Myiagra cyanoleuca (Vieillot)

This Australian species occasionally turns up in the Bismarck Archipelago as a winter visitor. A bird from Ralum (New Britain) was described as *M. novaepomeraniae* (Reichenow, 1899, Ornith. Monatsber., vol. 7, p. 8). O. Meyer has recorded the species from Lihir (1934, Jour. Ornith., vol. 82, pp. 299, 307). Meek collected one male and two females on Rook Island in July and August (1914, Novitates Zool., vol. 21, p. 215). (For full synonymy and Papuan range, see Mayr, 1941, List of New Guinea birds, p. 137.)

Myiagra modesta Gray

In view of the fact that this nominal species has not again been found on New Ireland since the original description (1860, Catalogue of the

birds of the tropical islands of the Pacific, p. 18), the suspicion has become very strong that an error in type locality is involved.

Examination of the type in the British Museum (Natural History), in which I was kindly assisted by Mr. J. D. Macdonald, showed clearly that it belongs to the species *M. rubecula*. The bases of the feathers of the throat are in part gray, while they are pure white in *ruficollis*. The tail-wing index of the type of *modesta* is 83. It is 83–90 in *M. rubecula* and 94–104 in *M. ruficollis*.

While there is no doubt as to the species, the identity of the subspecies cannot be established without a thorough revision of all the races of *M. rubecula*. The wing is 71, the tail 59, both being very small. The throat is whitish in the chin area, rich ochraceous on the lower throat. The lores are light gray, distinctly paler than the crown, which is of a very deep and rather glossy bluish gray. Differs from the females of most races of *rubecula* by having the back dark and rather bluish gray, not pale gray. The sex of the type is not given, but the bluish tint of the back suggests that it is an immature male, as does the paleness of the throat.

The fact that the species *M. rubecula* is not found elsewhere in the Bismarck Archipelago casts additional doubt on the stated type locality (New Ireland) of *M. modesta*.

Myiagra ferrocyanea

This species, restricted to the Solomon Islands, seems to belong to the same superspecies as *rubecula* (Australia, southern and eastern New Guinea) and *vanikorensis* (southern Melanesia). Distribution and characters of the five subspecies that occur in the Solomon Islands have been described by Mayr (1945, p. 258).

Petroica multicolor

This Australian species seems to have invaded the Solomon Islands from southern Melanesia. Its variation was described in a revision of this species (1934, Amer. Mus. Novitates, no. 714, pp. 11–16). In northern Melanesia the species is so far known only from San Cristobal, Kulambangra, and Bougainville; in all three places it was discovered by the Whitney South Sea Expedition.

Monachella mülleriana coultasi Mayr

This New Guinea species is known in northern Melanesia only from New Britain. Nothing new has been learned about the endemic New Britain race since its discovery by Coultas (Mayr, 1934, Amer. Mus. Novitates, no. 709, pp. 14–15).

WHISTLERS (PACHYCEPHALINAE)

The whistlers of the Solomon Islands (*Pachycephala implicata* and *P. pectoralis*) were revised earlier (Mayr, 1932, Amer. Mus. Novitates, no. 522, pp. 1–22). The additional material in the Rothschild Collection, not utilized in the cited revision, has fully confirmed my conclusions; it serves to strengthen the differences between the Vella Lavella and Ganonga population of *P. pectoralis* previously mentioned (1932, *ibid.*, no. 522, p. 17).

Not much will be said about the races of *P. pectoralis* in the Bismarck Archipelago, because they will be discussed in detail in a forthcoming revision by I. Galbraith. There are two groups of races in the area. One is an older group of endemics which includes *citreogaster* (= *finschi*; Rook Island, New Britain, New Ireland, New Hanover), *ottomeyeri* (Lihir), *tabarensis* (Tabar; see below), *sexuaria* (St. Matthias), and *goodsoni* (Manus). The other consists of the recently arrived *dahli*, which now occurs almost throughout the Bismarcks on various small islands: Nissan, Credner Islands (Palikuru), Duke of York Islands, Talele, islands in Bungula Bay, Long Island, French Islands (Witu), Malie (Lihir group; = *neuhausi*), and Nusa (near Kavieng). (For a map of the positions of many of these islands, see Jour. Ornith., 1934, vol. 82, p. 569). Each of these populations is a little different from the others, but not enough, in my opinion, to justify subspecific separation.

Most of these population differences appear to be due to interbreeding of the colonists with the earlier stocks of *pectoralis* occurring on adjacent islands. Large-scale hybridization (“*whitneyi*”) between *dahli*-like immigrants and *Pachycephala p. bougainvillei* occurs on small islets near Shortland Island in Bougainville Strait (see Mayr, 1932, *ibid.*, no. 522, pp. 7–10).

The nomenclature of *citreogaster-finschi* and of *dahli* is unfortunately not secure, until the names *merula* Lesson, 1828, and *salomonis* Oustalet (1877, Bull. Soc. Philom., Paris, ser. 6, vol. 11, p. 95, “Solomon Islands”) have been properly assigned or placed on the Official Index of Nomina Rejecta. The type of *merula* is a young female (type examined). “Wings brownish, some streaking on breast; under tail-coverts citrine yellow; tail olive; head and upper back drab.” Salvadori (1881, Ornithologia della Papuasias e delle Molucche, pt. 2, p. 219) thinks that this might be a young of *P. p. macrorhynchus* Strickland, 1849. *Pachycephala salomonis*, 1877, was probably collected on New Ireland and is apparently a synonym of *citreogaster* Ramsay, 1876 (see Mayr, 1932, *ibid.*, no. 522, pp. 21–22).

On the Tabar Islands, the Whitney South Sea Expedition (W. F.

Coultas) discovered a previously undescribed subspecies which is very distinct, though on the whole most similar to *citreogaster* (New Ireland, etc.) and *goodsoni* (Manus).

Pachycephala pectoralis tabarensis, new subspecies

TYPE: A.M.N.H. No. 335560; adult female; Tabar Island, Tabar group; January 14, 1935; Whitney South Sea Expedition (W. F. Coultas).

ADULT MALE: Except for size not clearly distinct from that of *goodsoni*, *citreogaster*, or *ottomeyeri*; yellow nuchal collar rather narrow. Tail black, black breast band wide; edge of secondaries olive; upper tail-coverts black, slightly washed with olive.

ADULT FEMALE: Fairly similar to that of *goodsoni* (Manus), but back of a brighter, purer olive-green; crown lighter and clearer gray; ear-coverts ochraceous ash colored, rather than brownish fuscous; breast and abdomen rather bright yellow with little cinnamon wash; throat almost white with little grayish streaking; cinnamon gorget pale and almost obsolete; wings only slightly more brownish than back. Differs from *citreogaster*, *sexuaria*, and *ottomeyeri* females by being much brighter green above, paler gray on the crown, and brighter underneath, with hardly any rufous cinnamon wash.

JUVENILES: Crown olive-green like back; under parts pale, wings cinnamon; bill light brown.

Measurements of *Pachycephala pectoralis tabarensis* are as follows (average in parentheses):

	WING	TAIL	BILL
Male adult	96.5, 97, 98, 100, 100, 101, 101		19.8–21.1 (20.5)
Male		69–71.5	
Female adult	91, 94	67, 68.5	
Female juvenile	86, 88, 90.5	66, 69, 70	

RANGE: Tabar Island, Tabar group.

In size this race is somewhat intermediate between the large *ottomeyeri* (Lihir) and small *citreogaster*. In the coloration of the female plumage it differs from all the neighboring races.

WOOD SWALLOWS (ARTAMIDAE)

Only one species of the family has reached northern Melanesia, namely, the endemic *Artamus insignis* Sclater of the Bismarck Archipelago. Although it lives in the lowlands, it seems to be most closely related to *Artamus maximus* from the mountains of New Guinea.

RANGE: New Britain and New Ireland.

There is no difference in size or color between birds of the two islands. As are other wood swallows, they are of remarkably uniform size.

Measurements of the wing are as follows:

	MALES	FEMALES
New Britain	143, 143.5, 145, 145, 145, 145, 146, 147, 147, 147, 147, 148	143.5, 144, 144, 144, 144, 144, 144
New Ireland	145, 146, 147, 147.5, 148	142.5, 144.5

STARLINGS (STURNIDAE)

GENUS *APLONIS*

This is the most prominent genus of the family on the islands of the Pacific. A detailed revision and the measuring of the extensive series of the Whitney South Sea Expedition still remain to be done. This is particularly true for *Aplonis cantoroides* and *Aplonis metallicus nitidus*, both of which are widespread in the Bismarck Archipelago and Solomon Islands. Both forms are absent from the Admiralty Islands, but *A. metallicus* is represented there by the endemic subspecies *purpureiceps* Salvadori (see Hartert, 1914, *Novitates Zool.*, vol. 21, p. 297). The variation of *Aplonis grandis* was described earlier (Mayr, 1931, *Amer. Mus. Novitates*, no. 504, pp. 19–22). It seems to have no close relative and must be a fairly old endemic. Possible relatives are *Aplonis obscurus* and *atrifuscus*.

Aplonis feadensis is not yet fully understood. To it apparently belong nominate *feadensis* (= *longipennis* Neumann), *insularis* (see Mayr, 1945, p. 263) in the Solomon Islands, and *heureka* Meise (1929, *Ornith. Monatsber.*, vol. 37, p. 111) in the Ninigo Islands.

One of the most interesting endemics of the Solomon Islands is the White-eyed Starling, *Aplonis brunneocephalus* Danis. Owing to its great superficial similarity to *metallicus*, it was long overlooked. Until the recent war, it was known from only two specimens, one from Bougainville and one from Rendova, but has since been found to be not uncommon on Guadalcanal (Beecher, 1945, *Fieldiana, Zool.*, vol. 31, pp. 31–33). The relationship of this species is clearly with *A. mystaceus* from New Guinea (Amadon, 1943, *Amer. Mus. Novitates*, no. 1247, p. 16).

Acridotheres tristis Linnaeus

The Indian Mynah has been introduced into many islands in the Pacific. In the Solomon Islands it was first released in the Russell Islands (Pavuvu, Banika), but it may have spread from there to other

islands. In the Pacific it was collected by the Whitney South Sea Expedition in the Society Islands (Tahiti, Moorea), Austral Islands (Tubuai), Fiji Islands (Viti Levu, Yasawa), and New Hebrides (Epi, Tanna).

Mino dumontii

A detailed study of the geographic variation of this species in northern Melanesia still remains to be done. The type locality of *kreffti* is probably New Ireland (Mayr, 1933, Ibis, pp. 549–552); it extends to the western Solomon Islands. The populations on Guadalcanal and Malaita are of somewhat smaller size and were described by Hartert as *sanfordi* (1929, Amer. Mus. Novitates, no. 364, p. 18). The New Britain race *giliau* Stresemann bridges the gap to the nominate race on New Guinea.

AUSTRALIAN MAGPIES (CRATICIDAE)

Gymnorhina tibicen apparently was introduced on Guadalcanal (Beecher, 1945, Fieldiana, Zool., vol. 31, p. 36).

DRONGOS (DICRURIDAE)

The drongos of northern Melanesia have been so thoroughly discussed by Vaurie (1949, Bull. Amer. Mus. Nat. Hist., vol. 93, pp. 290–291) that nothing further need be added. Two independent invasions are apparently involved. *Dicrurus hottentottus laemostictus* Sclater (New Britain) and *Dicrurus megarhynchus* Quoy and Gaimard (New Ireland) came apparently from northern New Guinea (*D. h. carbonarius*), while *D. h. meeki* Rothschild and Hartert (Guadalcanal) and *D. h. longirostris* Ramsay (San Cristobal) came apparently from eastern New Guinea or the Louisiades. With the exception of *laemostictus* these are all very distinct endemics.

CROWS (CORVIDAE)

There is only one species of crow on any one island in northern Melanesia.

Corvus orru insularis Heinroth is found on the larger islands of the Bismarcks (Rook, New Britain, New Ireland, and New Hanover) but also on Witu (French Islands). Differs from *orru* (New Guinea) mainly by its smaller size. (See Stresemann, 1943, Jour. Ornith., vol. 90, p. 126.)

Superspecies *Corvus woodfordi*

The Bougainville species *C. meeki* is very close to allopatric *C. woodfordi*, but differs by its black bill and glossier plumage.

Corvus woodfordi occurs on the three islands Choiseul, Ysabel, and Guadalcanal (type locality). Tristram (1894, Ibis, p. 30) separated the Ysabel population on account of greater size. This has been confirmed by later collections. Unfortunately, the birds from Choiseul, beyond Ysabel, are similar in size to Guadalcanal birds, as pointed out correctly by Hartert (1929, Amer. Mus. Novitates, no. 364, p. 19) and confirmed by the measurements listed in table 7. A tendency towards large size on Ysabel Island has also been found in other species (e.g., *Porphyrio*). This would seem to be one of the cases where a subspecies name is more misleading than helpful, and it might be better to list the three populations under the binomen *Corvus woodfordi*.

This superspecies stands rather isolated. It has definitely nothing to do with *orru*, but is evidently distantly related to *moneduloides* from New Caledonia.

TABLE 7
MEASUREMENTS OF ADULTS OF *Corvus woodfordi*

	Males	Females
Guadalcanal		
Wing	271, 271, 273, 274, 274, 275, 275, 277, 280, 281, 281, 281, 282, 284	260, 266, 267, 267, 267, 270, 271, 271.9, 272, 272, 275, 276, 276, 277, 281, 281
Bill	63, 63.5, 64, 64, 65	
Choiseul Island		
Wing	274, 278, 279, 280, 281, 284, 286, 291, 291, 293, 294	270, 271, 276, 278, 278, 280, 285, 286
Bill	63, 63, 63.5, 63.5, 65, 66	
Ysabel Island		
Wing	289, 300	277, 281, 282, 288.6, 289, 290, 294, 296, 296, 296

FLOWERPECKERS (DICAETIDAE)

A complete revision of the family has been published recently (Mayr and Amadon, 1947, Amer. Mus. Novitates, no. 1360). Only the *Dicaeum cruentatum* group has reached northern Melanesia, where it is represented by three allopatric species (*eximium*, *aeneum*, and *tristrami*).

Dicaeum eximium

This species is characterized by the red rump, a black central stripe on the abdomen, and a rather small red mark across the breast. The New

Ireland and New Hanover subspecies *eximium* Sclater differs from *layardorum* (New Britain) by the reduction of the greenish colors in the plumage. Crown and sides of head suffused with dark reddish. Sides of throat and breast fuscous, not gray; less olive on flanks. (See also Hartert, 1924, *Novitates Zool.*, vol. 31, p. 211.)

Measurements of the wing in males are as follows :

New Britain, <i>layardorum</i>	50, 50.5, 51, 51, 51, 51, 52.5, 53, 53, 53.5
New Ireland, <i>eximium</i>	50, 50, 51, 51, 52, 53, 53.5, 54

Dicaeum aeneum

In the Solomon Islands this species is restricted to the tier of islands from Bougainville to Guadalcanal. It is characterized by the absence of red on the upper parts. The nominate subspecies occurs on Bougainville, the islands of Bougainville Strait, Choiseul, Ysabel (type locality), and Tulagi. Tulagi birds show no evident approach towards *becki* (contrary to Hartert's statement, 1929, *Amer. Mus. Novitates*, no. 364, p. 9).

The Guadalcanal subspecies (*becki* Hartert) differs by the golden-citrine, not gray-green, wash of the flanks, the more scarlet throat patch, and the bottle green, instead of blue-green, gloss of the upper parts, also by its larger dimensions. A series from Malaita is closer to *becki* in the coloration of the upper parts and to *aeneum* in that of the under parts and in size.

Measurements of the wing in males are as follows :

Bougainville	51, 51, 51.5, 52, 52
Choiseul	48.5, 52
Tulagi	49.5, 52.5
Guadalcanal	52, 52, 52, 52, 52, 53, 53, 53, 53, 53.5, 54, 54, 54, 54, 54, 55, 55

Dicaeum tristrami Sharpe

This striking endemic is nevertheless clearly a descendant of the *Dicaeum cruentatum* group (Mayr and Amadon, 1947, *Amer. Mus. Novitates*, no. 1360). At first sight it does not even look like a *Dicaeum*. It is restricted to San Cristobal and has all the characteristics of a "peripheral isolate."

SUNBIRDS (NECTARINIIDAE)

Two species of this family are found in northern Melanesia. The New Guinea species *Nectarinia sericea* is found only in parts of the Bismarck Archipelago, but *Nectarinia jugularis flavigaster* is found throughout the Bismarcks and Solomon Islands. There is some slight geographic variation in color and size which has, however, not been worked out in detail.

Nectarinia sericea corinna Salvadori

Birds from most of the islands of the Bismarck Archipelago agree in the male plumage with topotypical specimens from the Duke of York Islands. There is some variation in the color of crown, lower breast, and throat but not sufficiently definite to justify subspecific separation of any of the populations. New Britain birds are small.

Females from New Hanover and New Ireland are virtually indistinguishable from those from New Britain. A single female each from Tabar and Lihir appears to have the abdomen of a duller, more greenish yellow. The back also appears to be darker, but the difference is very slight. Birds from these two islands agree in this respect with the female of *eichhorni*.

RANGE: Rook, Unia (French Islands), New Britain, Duke of York Islands, New Ireland, New Hanover, Tabar, and Lihir.

Males of Feni Island (*eichhorni*; Rothschild and Hartert, 1926, *Novitates Zool.*, vol. 33, p. 41) have the crown a deeper, less brilliant bluish green, lower back and rump a purer steel blue, and the throat purple, not bluish.

Measurements are as follows:

	MALES	FEMALES
New Britain		
Wing	53.5, 54, 54, 54, 55, 56	
New Ireland		
Wing	60, 60.5, 60.5, 62, 63, 63.5, 65	53
Bill from nostril	17, 17	
New Hanover		
Wing	62, 62.5, 63, 65	55, 55
Bill from nostril	13, 15, 15, 16.5	
Lihir		
Wing	62.5, 64, 64, 65, 65, 65, 65.5, 66, 66, 66, 66.5	57
Bill from nostril	15, 15, 15, 15.5, 15.5, 16, 16, 16, 16.5	15
Tabar		
Wing	64.5, 65, 65, 66.5	57
Bill		13
Feni (<i>eichhorni</i>)		
Wing	61, 61	54
Bill	15.5, 16	

The species is absent from the Admiralty Islands and St. Matthias and from the Solomon Islands, including Nissan.

HONEYEATERS (MELIPHAGIDAE)

A revision of the honeyeaters of the Solomon Islands has already been published (Mayr, 1932, Amer. Mus. Novitates, no. 516, pp. 1-30). Since then it has been recognized that *Myzomela malaitae* is not a race of *cardinalis*, but belongs to the superspecies *M. lafargei* (see Mayr, 1945, p. 268). Meise has recently erected a genus for the very non-descript species *Meliphaga bougainvillei* (*Stresemannia* Meise, 1950, Ornith. Ber., vol. 2, p. 118). It seems, however, quite impossible to separate a single species from the diversified genus *Meliphaga* on the basis of a virtually negative diagnosis ("lacking wattles and ear tufts"). The recognition of a monotypic genus based on such slight characters indicates a lack of comprehension of the meaning of the generic category.

The most diversified group of honeyeaters in this region is the genus *Myzomela*. A revision of this genus by Dr. Karl Koopman is completed in manuscript. The following comments on variability in three of the species in the Bismarck Archipelago may be useful.

Myzomela eques

Only two races have been described from the Bismarck Archipelago, namely, *rooki* Hartert from Rook Island and *cineracea* Sclater from New Britain. The species is absent from the other islands. Males of the two races do not seem to differ from each other appreciably except that New Britain birds are perhaps somewhat darker, blacker above. There are no differences between females.

Measurements of males are as follows:

	WING	TAIL
New Britain	72, 74, 74, 74, 74.7, 75, 75, 76, 76, 76.5	55, 55, 56, 57, 58, 58, 59, 60.5
Rook Island	76, 76, 77	59, 60, 61

These measurements show that Rook Island birds average slightly larger (but with weaker bills?). Still the difference between the two populations is so slight that it appears questionable that *rooki* should be maintained.

Myzomela sclateri Forbes

This species is found in the southern half of the Bismarck Archipelago but seems to be restricted to small islands. It has been reported from Dampier Island, Long Island, the Witu Islands, Rook Island, the Talele Islands, Vuatom, and from Nanuka, Credner Islands. The color of the back varies in the same series from sooty olive-gray to deep black. There seems to be no geographical trend in this character or in size.

Measurements of the wing of males are as follows :

Dampier Island	63, 63, 64
Long Island	61, 62, 63.5
Witu Island	64, 64, 64, 65, 66.5
Talele	62, 63, 63.5, 63.5
Vuatom	64, 65, 66

Myzomela cruentata

Geographic variation and nomenclature in this species are not yet fully understood. Ramsay (1877) described *coccinea* from the Duke of York Islands and *erythina* (universally amended to *erythrina*) from New Ireland. The differences given by him are irrelevant, being those of different plumages. Later (1884) Sharpe described *kleinschmidti* from New Britain, but did not give really diagnostic differences. Hartert (1924, *Novitates Zool.*, vol. 31, p. 210) believes all three names belong to a single form. Yet there is some evidence for difference between birds from New Britain and New Ireland. As Duke of York birds are almost invariably identical with New Britain birds, the name *kleinschmidti* must be considered a synonym of *coccinea*, unless new material from the Duke of York Islands reveals a difference.

Myzomela cruentata coccinea Ramsay

The American Museum collection lacks adequate material for a proper description of this race. It is apparently characterized in the female plumage by having the red restricted to forehead, chin, and tail. The back is grayish olive, and the under parts are rather light grayish, whitish on the middle of the belly. Males differ by having the crown a bright, almost scarlet-red (not vinaceous or blackish crimson) and by being colored with a lighter, more scarlet-red throughout. Size small. Male (juv.), wing, 55.5, 56; bill, 16, 16.5.

RANGE: New Britain, Duke of York Islands.

Myzomela cruentata erythrina Ramsay

Males of a deep crimson-scarlet, with rump and abdomen brightest and the crown rather blackish. Females vinaceous throughout, darker on the back, lighter underneath on a light gray background, brightest on the throat.

Measurements are as follows :

	WING	BILL
Male	57, 59, 60, 60, 60.5	17, 17, 17.5
Female	51.5, 52.5	
Male juvenile	56	

RANGE: New Ireland.

Myzomela cruentata cantans, new subspecies

TYPE: A.M.N.H. No. 335582; adult female; Tabar Island, Tabar group; January 21, 1935; Whitney South Sea Expedition (W. F. Coultas).

Differs from *erythrina* by being darker and with the red even less scarlet, more wine red. Females are very much darker; the upper parts are of a deep, rich, wine red; the under parts likewise are very dark, with the throat red and the remainder of the under parts dark gray with a reddish tint.

Measurements are as follows:

	WING	BILL
New Hanover		
Males	60.5, 61, 61, 63, 64	
Females	52, 54	
Male juvenile	57	
Tabar		
Males	60.5, 61.5, 62, 63, 63, 63, 63, 63	17, 17
Females	53, 57.5, 58	
Male juvenile	60.5	

The populations in the Bismarck Archipelago form a cline from bright, more or less scarlet birds to dark, more or less vinaceous crimson birds. This cline goes from New Britain to New Ireland to New Hanover to Tabar. In this cline there is a pronounced step between New Britain and New Ireland, and a second between New Ireland and New Hanover.

RANGE: Tabar Island and New Hanover.

The New Hanover population is somewhat intermediate between Tabar and New Ireland birds. On the whole, it agrees so much more closely with Tabar birds in size and general color that it would be inadvisable to separate them.

GENUS *PHILEMON*

There are three good species of the superspecies *Philemon moluccensis* (Mayr, 1944, Bull. Amer. Mus. Nat. Hist., vol. 83, pp. 166-167) in northern Melanesia. The species *P. novaeguineae* is represented on Rook Island by *P. novaeguineae umboi* Hartert (1926, Novitates Zool., vol. 33, p. 143) and on New Britain by *P. n. cockerelli* Sclater. On New Ireland, we find *Philemon eichhorni* Rothschild and Hartert, and on Manus, *P. albitorques* Sclater. The genus did not reach the Solomon Islands.

WHITE-EYES (ZOSTEROPIDAE)

This family is well represented in northern Melanesia, particularly in the Solomon Islands. Taxonomically these forms are fairly well known. The Solomon Islands species were revised by Murphy (1929, Amer. Mus. Novitates, no. 365, pp. 1-11), and their position in the family as a whole indicated by Stresemann (1931, Mitt. Zool. Mus. Berlin, vol. 17, pp. 201-238). (For short descriptions and keys of the Solomon Islands forms, see Mayr, 1945, pp. 270-274).

Only two species occur in the Bismarck Archipelago.

Zosterops griseotincta

Two somewhat isolated populations of this species are found in the Bismarck Archipelago. Both are related to *eichhorni* Hartert (Nissan), a form which is characterized by the rather greenish general coloration. One of the two populations occurs on Nauna Island, Admiralty Islands. It was separated by Stresemann (1930, Ornith. Monatsber., vol. 38, p. 90) as *ottomeyeri*. The diagnosis stated: "Very similar to *eichhorni* but smaller. Underparts and lores more golden yellow, less greenish. Wing 58-60 as against 61.5-65." In the extensive material before me there is very little difference in general coloration, but the lores of Nauna birds are indeed distinctly yellower. The upper throat also is clearer yellow. On the upper parts there is very little difference, but if anything it is the Nissan series which is more citrine-green.

A second population occurs on Long Island. A series collected by Coultas is distinctly more yellowish below than Nauna birds. However, the specimens are rather worn. Legs and feet appear to be more yellowish brown (less fuscous gray) than in the other two populations. However, this population is not sufficiently different from *ottomeyeri* to justify being named.

All three of these populations have a yellow bill, whereas in *longirostris* Ramsay it is light brown (and also longer). Otherwise *longirostris* is most similar to *eichhorni* in its greenish coloration. Northern Melanesia was clearly invaded from the area of the Louisiades and ultimately from Torres Strait (Mayr, 1944, Bull. Amer. Mus. Nat. Hist., vol. 83, p. 169).

Measurements of the wing in males are as follows:

Nissan	62, 62, 62.5, 62.8, 63, 63.5, 64
Nauna	59, 60, 60, 60, 60.5, 60.7, 61, 61.5, 62, 62, 63
Long Island	59, 60.5, 61, 61.3, 61.5, 61.5, 62, 62, 62, 62.5

Zosterops minor Group

Stresemann, in his revision of the Indo-Australian Zosteropidae (1931, Mitt. Zool. Mus. Berlin, vol. 17, pp. 221-223), recognizes *delicatula*,

hypoxantha, and *minor* as three species. Mayr (1933, Ornith. Monatsber., vol. 41, p. 53) combined *minor* and *delicatula*, but there is really no reason for excluding *hypoxantha* from this group merely because the abdomen is yellow. Geographic variation of the abdomen from white to yellow (or reverse) is a common phenomenon in *Zosterops* and has been recorded for at least six species (Mayr, 1944, Bull. Amer. Mus. Nat. Hist., vol. 83, p. 169).

Zosterops metcalfei from the Solomon Islands may be another representative of *minor*, which is particularly probable for zoogeographic regions. Yet the possibility of relationship with *novaeguineae* cannot be disproved.

Three races of this species are found in the Bismarck Archipelago. They form a uniform group which originated in New Guinea.

Zosterops minor hypoxantha Salvadori

Upper parts olive-green, crown, parts of nape, and sides of head blackish. Under parts yellow. White eye-ring present. Bill black; feet lead gray; iris reddish brown.

RANGE: New Britain.

The receipt of a fine series of *hypoxantha* from the type locality (New Britain) reveals that the birds of New Ireland and New Hanover belong to an underscribed race.

Zosterops minor ultima, new subspecies

TYPE: A.M.N.H. No. 700443, Rothschild Collection; male; New Hanover; February 12, 1923; A. F. Eichhorn.

Similar to *hypoxantha* but upper parts of a brighter, clearer citrine-green. Black of crown not extending so far back onto the nape; white eye-ring broader; under parts brighter yellow; less of a greenish wash on sides of the breast and flanks.

Two specimens from New Ireland are somewhat intermediate but closer to *ultima*. The under parts are not so clear yellow, but the black on the crown is very much reduced.

RANGE: New Hanover and New Ireland.

Zosterops minor admiralitatis Rothschild and Hartert

Differs by the much narrower white eye-ring and the duller under parts. Chin and upper throat are washed with blackish and the lower throat with greenish. Agrees with *ultima* in the bright citrine coloration of the upper parts.

RANGE: Manus, Admiralty Islands.

Measurements of the wing of adults are as follows:

	MALES	FEMALES
New Britain	55, 56, 56, 56, 57, 57, 57, 57.5, 58, 60	55, 56, 56.5, 57, 58
New Ireland	58, 60	
New Hanover	57, 58.5, 59, 59, 59, 59.5, 60	59
Manus	54, 54.5, 55, 56, 56.5, 57	

WEAVER FINCHES (ESTRILDINAE)

The species of weaver finches in northern Melanesia belong to three species groups:

1. *Erythrura trichroa*

This widespread species, of which the center of distribution is in the New Guinea area, has reached northern Melanesia at three widely separated points. *Erythrura t. woodfordi* Hartert (1900, Novitates Zool., vol. 7, p. 7) is restricted to Guadalcanal, and *E. t. eichhorni* Hartert (1924, Novitates Zool., vol. 31, p. 274) to St. Matthias, while the widespread *sigillifera* has been reported from the mountains of New Ireland (Hartert, 1925, Novitates Zool., vol. 32, p. 135) but, curiously, not from New Britain. (For a discussion of the species and its relatives, see Mayr, 1931, Amer. Mus. Novitates, no. 489, pp. 1-10.)

2. *Lonchura melaena* Sclater

This large-billed New Britain endemic is the only representative of the *L. castaneothorax* group in northern Melanesia.

3. Superspecies *Lonchura spectabilis*

This superspecies consists in the Bismarck Archipelago of three species: *spectabilis*, *forbesi*, and *hunsteini*. The south New Guinea species *nevermanni* may also belong to it (Delacour, 1943, Zoologica, New York Zool. Soc., vol. 28, p. 83). The nominate race of *spectabilis* is restricted to New Britain. In New Ireland, one finds *L. forbesi* and in the extreme north of New Ireland (Kavieng district) *L. h. hunsteini* Finsch, which on New Hanover is represented by *L. h. nigerrima* Rothschild and Hartert (see 1924, Novitates Zool., vol. 31, p. 213). There is apparently no overlap between the range of *forbesi* and that of *hunsteini*, but it remains to be determined whether or not the two species have a contact zone in northern New Ireland and whether or not they interbreed in this zone.

No species of *Lonchura* has reached the Solomon Islands. In fact on the whole these weaver finches are poor colonizers of islands. Yet *hunsteini* succeeded in reaching Ponape Island in Micronesia (*minor* Yamashina, 1931).